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March 22, 2002

Via Electronic Filing
Mr. William F. Caton
Acting Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: *Ex Parte* Presentation
IB Docket No. 95-91

Dear Mr. Caton:

In an *ex parte* filing dated December 21, 2001, XM Radio Inc. ("XM Radio") presented an analysis of how the use of front-end RF AGC in WCS consumer receivers will protect those receivers from overload and intermodulation interference that might otherwise be caused by adjacent band operations of either DARS repeaters or other WCS licensees. *See* XM Radio Ex Parte Filing, IB Docket 95-91 (Dec. 21, 2001), at 6. This analysis assumed that WCS receivers would operate in a fixed environment. At the suggestion of Commission staff, XM Radio hereby provides the attached analysis of how front-end RF AGC will also protect WCS *mobile* consumer receivers from potential overload and intermodulation interference from adjacent band DARS repeaters or other WCS licensees. Figure 1 contains the assumptions used in this analysis. Figure 2 describes how RF-AGC will resolve overload and intermodulation interference in the scenarios presented.

Please direct any questions regarding this matter to the undersigned.

Very truly yours,

David S. Konczal

cc: Robert Bromery
Robert Eckert
Richard Engelman
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Figure 1

WCS Mobile Receiver Analysis

- Assumptions
  - 3 mile cell size
  - Base TX power 50 watts
  - RX antenna gain 3dBi
  - D^n Path loss model for WCS signal n = 3.18
  - D^n Path loss model for SDARS signal n = 3.18
  - IMD Overload point = 40 dB power differential
  - Front end Overload point = 45 dB power differential
  - Fading margin for WCS = 10 dB
  - Fading margin for SDARS = 0 dB

Figure 2

WCS Mobile Receiver Analysis Results

SDARS EIRP (WATTS)	WCS EIRP (WATTS)	WCS CELL SIZE (Mi)	WCS RCVR DISTANCE FROM BASE (Mi)	SDARS INTERFERING PATH LENGTH (Mi)	WCS RECEIVE LEVEL	WCS EXCESS LINK MARGIN (dB)	SDARS SIGNAL AT RECEIVER (dBm)	DIFFERENCE BETWEEN SDARS AND WCS (dB)	AGC WORKS FOR OVERLOAD WITHOUT IMPACTING PERFORMANCE	AGC WORKS FOR IM WITHOUT IMPACTING PERFORMANCE
40,000	50	3	3	5	-77	3	-49.7	27.5	YES	YES
		3	2	2	-72	8	-37.0	34.5	YES	YES
		3	1	1	-62	18	-27.4	34.5	YES	YES
		3	3	15	-77	3	-64.8	12.3	YES	YES
		3	1	11	-62	18	-60.5	1.4	YES	YES
		3	3	65	-77	3	-85.1	-7.9	YES	YES
		3	2	62	-72	8	-84.4	-12.9	YES	YES
		3	1	61	-62	18	-84.2	-22.2	YES	YES
		3	3	75	-77	3	-87.1	-9.9	YES	YES
		3	3	73	-77	3	-86.7	-9.5	YES	YES
		3	2	72	-72	8	-86.5	-15.0	YES	YES
		3	3	285	-77	3	-105.5	-28.4	YES	YES
20,000	50	3	3	5	-77	3	-52.7	24.5	YES	YES
		3	2	2	-72	8	-40.0	31.5	YES	YES
		3	1	1	-62	18	-30.4	31.5	YES	YES
		3	3	15	-77	3	-67.8	9.3	YES	YES
		3	3	65	-77	3	-88.1	-10.9	YES	YES
		3	2	62	-72	8	-87.4	-15.9	YES	YES
		3	3	205	-77	3	-103.9	-26.8	YES	YES
10,000	50	3	3	5	-77	3	-55.7	21.5	YES	YES
		3	2	2	-72	8	-43.0	28.5	YES	YES
		3	1	1	-62	18	-33.4	28.5	YES	YES
		3	3	65	-77	3	-91.1	-13.9	YES	YES
		3	2	62	-72	8	-90.4	-18.9	YES	YES
		3	3	145	-77	3	-102.2	-25.0	YES	YES
5,000	50	3	3	5	-77	3	-58.7	18.5	YES	YES
		3	2	2	-72	8	-46.0	25.5	YES	YES
		3	3	15	-77	3	-73.8	3.3	YES	YES
		3	1	11	-62	18	-69.5	-7.6	YES	YES
		3	3	105	-77	3	-100.7	-23.6	YES	YES
2,000	50	3	3	5	-77	3	-62.7	14.5	YES	YES
		3	1	1	-62	18	-40.4	21.5	YES	YES
		3	3	15	-77	3	-77.8	-0.7	YES	YES
		3	1	11	-62	18	-73.5	-11.6	YES	YES
		3	3	65	-77	3	-98.1	-20.9	YES	YES

Technical Certification

I, Craig Wadin, Vice President-RF Systems of XM Radio Inc., certify under penalty of perjury that:

I am the technically qualified person with overall responsibility for the preparation of the technical information contained in the above analysis. The information contained in this document is true and correct to the best of my belief.

Craig Wadin

Dated: March 22, 2002